Air Quality Permitting
Statement of Basis

February 24, 2005

Tier II Operating Permit and Permit to Construct No. T2-040124

Potlatch Corporation, St. Maries

Facility ID No. 009-00030

Prepared by:

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AIR QUALITY DIVISION

PUBLIC COMMENT

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Acronyms, Units, and Chemical Nomenclature

CO	carbon monoxide
DEQ	Department of Environmental Quality
EPA	Environmental Protection Agency
HAPs	Hazardous Air Pollutants
IDAPA	A numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
NO_X	nitrogen oxides
O&M	operation and maintenance
PM	Particulate Matter
PM_{10}	Particulate Matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PTC	Permit to Construct
Rules	*Rules for the Control of Air Pollution in Idaho*
SO_2	sulfur dioxide
T/yr	Tons per year
VOC	volatile organic compound

1. PURPOSE

The purpose for this memorandum is to satisfy the requirements of IDAPA 58.01.01 Sections 201 and 404.04, *Rules for the Control of Air Pollution in Idaho* (*Rules*) for Permits to Construct and Tier II operating permits.

2. FACILITY DESCRIPTION

The Hurst wood and wood-waste-fired boiler produces steam, which is used to heat four lumber-drying kilns. Various types of wood are dried in the kilns. The particulate emissions from the boiler are controlled by a multiclone and an ESP.

The oil and edge-seal process applies coatings to plywood panels making them suitable for use as concrete forming material. Untreated plywood panels are placed one at a time on a conveying system and transported through a modified glue spreader that uses two large rollers to apply the coating to the upper and lower surfaces of the panels. The upper surface of the panels is flood-coated with the release agent using a low-pressure sprayer nozzle before the panel goes through the spreader rolls. Excess release agent is collected and recycled in the lower reservoir under the spreader. The panels are then stacked, and an edge-sealing compound is sprayed on the edges of the stacked panels.

3. FACILITY / AREA CLASSIFICATION

The facility is defined as a major facility because the facility is permitted to emit greater than 100 tons per year each of VOC and CO. Emissions from the part of the facility located on tribal lands are not included in this analysis or permit. The AIRS/AFS facility classification is A, because the facility has a potential to emit greater than 100 tons per year of VOC and CO. This facility is a lumber drying facility, SIC 2421.

Potlatch St. Maries, Benewah County, Idaho, is located in AQCR 62 and UTM zone 11. The area is classified as unclassifiable for federal and state criteria air pollutants. There are no Class I areas within 10 kilometers (km) of the facility.

The AIRS information provided in Appendix B defines the classification for each regulated air pollutant at Potlatch Corporation. This required information is entered into the EPA AIRS database.

4. APPLICATION SCOPE

Potlatch Corporation's current permit requires that the power input of the ESP for the boiler be tested and operated within a range of power inputs. The facility requests, per EPA CAM technical guidance document, that only the lower limit for power input be tested and set as a limit.

There are no other changes to the permit. The expiration date remains unchanged at April 7, 2009.

4.1 Application Chronology

10/20/04	Application received
11/18/04	Application declared complete

5. PERMIT ANALYSIS

This section of the Statement of Basis describes the regulatory requirements for this Tier II and PTC.

5.1 Fee Review

Per IDAPA 58.01.01.407, this permit modification required minimal engineering analysis. Therefore, the permit processing fee is $500.00. The facility is a major source and is subject to Title V registration fees. The facility is current with these fees.

6. PERMIT CONDITIONS

The permit conditions were modified as follows:

Original Permit Condition 2.8

The permittee shall conduct a monthly facility wide inspection of potential sources of visible emissions during daylight hours and under normal operating conditions. The visible emissions inspection shall consist of a see/no see evaluation for each potential source. If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable, or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60 minute period, the permittee shall take all necessary corrective action and report the exceedance in accordance with IDAPA 58.01.01.130-136. If the monthly see/no see observations indicate that no visible emissions are observed for four consecutive months or if Method 9 observations indicate that the opacity is below 20% for four consecutive months, or any combination of see/no see or Method 9 observations indicate no visible emissions or opacity, the frequency of observations decreases to once per quarter. If any quarterly Method 9 observations indicate opacity greater than 20%, the observation frequency reverts to monthly. The permittee shall maintain records of the results of each monthly visible emissions inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

Revised Permit Condition 2.8

The permittee shall conduct a monthly facility wide inspection of potential sources of visible emissions during daylight hours and under normal operating conditions. The visible emissions inspection shall consist of a see/no see evaluation for each potential source. If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable, or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60 minute period, the permittee shall take all necessary corrective action and report the exceedance in accordance with IDAPA 58.01.01.130-136. If the monthly see/no see observations indicate that no visible emissions are observed for four consecutive months or if Method 9 observations indicate that the opacity is below 20% for four consecutive months, or any combination of see/no see or Method 9 observations indicate no visible emissions or opacity exceedances, the frequency of observations decreases to once per quarter. If any quarterly Method 9 observations indicate opacity greater than 20%, the observation frequency reverts to monthly. The permittee shall maintain records of the results of each monthly visible emissions inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

Permit Condition 2.8 was revised to add the word, "exceedances" for clarification as shown in this excerpt from the permit condition:

If the monthly see/no see observations indicate that no visible emissions are observed for four consecutive months or if Method 9 observations indicate that the opacity is below 20% for four consecutive months, or any combination of see/no see or Method 9 observations indicate no visible emissions or opacity exceedances, the frequency of observations decreases to once per quarter.

A performance test was conducted on August 4 and 5, 2004, in which compliance with the particulate limits were verified for operation using one T/R set and two T/R sets. The steaming rate measured when only one T/R set was used was less than the steaming rate measured when both T/R sets were in operation. Permit Condition 3.3.2 was rewritten to clarify that the allowable steaming rate will be limited to the steaming rate measured during the test. Unless further testing demonstrates compliance with the particulate limits at a higher steaming rate, the steaming rate is limited to a lower value, as tested, when only one T/R set is in operation.

Original Permit Condition 3.3.2:

If performance testing done in accordance with Permit Conditions 3.7 and 3.9 verifies compliance with Permit Conditions 2.7 and 2.13 when operating only one of the transformer-rectifier (T/R) sets on the ESP, then the boiler may be operated for a reasonable period of time using only one T/R set should one become nonfunctional. Repairs to the second T/R set shall be made as expeditiously as possible.

Modified Permit Condition 3.3.2:

If performance testing done in accordance with Permit Conditions 3.7 and 3.9 verifies compliance with Permit Conditions 2.7 and 2.13 when operating only one of the transformer-rectifier (T/R) sets on the ESP, then the boiler may be operated for a reasonable period of time using only one T/R set should one become nonfunctional. While operating only one of the T/R sets, the steaming rate shall not exceed the average steaming rate as defined in Permit Condition 3.6.1 measured during the performance test used to establish the steaming rate limit for operation using only one T/R set. Repairs to the second T/R set shall be made as expeditiously as possible.

Original Permit Condition 3.7:

The permittee shall conduct a particulate matter compliance test in accordance with Permit Condition 2.12 and General Provision 9. The test shall be conducted within 6 months of issuance of this permit to demonstrate compliance with Permit Conditions 2.7 and 2.13 and to establish the appropriate operating range for the power input (secondary voltage and current) for both of the ESP transformer/rectifier sets to assure continuous compliance with Permit Conditions 2.7 and 2.13.

Modified Permit Condition 3.7:

The permittee shall conduct a particulate matter compliance test in accordance with Permit Condition 2.12 and General Provision 9. The compliance test shall be conducted within 6 months of issuance of this permit to demonstrate compliance with Permit Conditions 2.7 and 2.13 and to establish the minimum hourly power input (secondary voltage x current) for both of the ESP transformer/rectifier sets to assure continuous compliance with Permit Conditions 2.7 and 2.13.

This change was made as requested by Potlatch Corporation based on a United States Environmental Protection Agency (EPA) publication, CAM Technical Guidance Document, dated 9/00, Electrostatic Precipitator (ESP) for PM Control – Facility FF. The ESP portion of this document is included in Appendix A. Table A.25-1 of the referenced document shows an indicator range excursion as defined as an ESP power input less than 15 kW. On Page A.25-3, this is further described as follows: "An excursion is defined as an hourly average ESP power input less than 25 kW." This is an example of the monitoring approach to use for and ESP on a boiler. There is no mention of an upper limit that would indicate an excursion. In addition, on Page A.25-3, it is stated, "As a general rule, ESP performance improves as total power input increases." This indicates that an upper limit is not necessary.

The ESP power input example includes the description, "hourly average ESP power input" for determination of excursions. Table A.25-1 shows the example monitoring frequency of every 15 minutes, with the hourly average power input calculated and recorded. The averaging period is shown a one hour. Therefore, Potlatch Corporation's request to specify that the testing be used to establish the minimum hourly power input was granted.

Original Permit Condition 3.10

The permittee shall monitor and record the following information during each compliance test:

- *Visible emissions, using the methods and procedures contained in IDAPA 58.01.01.625*
- *Steam production rate, expressed as pounds of steam per hour (lb/hr)*
- *Wood-waste fuel analysis*
- *Power input to the ESP (the sum of the secondary voltage times secondary current for both transformer-rectifier (T/R) sets, or* $P = V_1I_1 + V_2I_2$*)*

Revised Permit Condition 3.10

The permittee shall collect a fuel sample for a wood waste fuel analysis and monitor and record the following information during each compliance test:

- *Visible emissions, using the methods and procedures contained in IDAPA 58.01.01.625*
- *Steam production rate, expressed as pounds of steam per hour (lb/hr)*
- *Power input to the ESP (the sum of the secondary voltage times secondary current for both transformer-rectifier (T/R) sets, or* $P = V_1I_1 + V_2I_2$*)*

Original Permit Condition 3.12:

Operation and Maintenance manuals shall be developed for the boiler, multiclone, and ESP within 60 days of issuance of this permit. The permittee shall have developed an O&M manual for the ESP according to manufacturer specifications and recommendations. This manual shall describe the methods and procedures that will be followed to assure the ESP is maintained in good working order and operated as efficiently as practical. The O&M manuals shall be updated as necessary and shall include, at a minimum, the most recent general descriptions of the equipment; the normal operating conditions and procedures for the boiler; startup, shutdown, and maintenance procedures; upset conditions guidelines; and corrective action procedures. After performance testing is completed in accordance with Permit Condition 3.7 which determines the operating range for the secondary power (voltage and current) for each of the T/R sets, this range shall be specified as the required operating range in the O&M manual for the ESP.

Revised Permit Condition 3.12:

Operation and Maintenance manuals shall be developed for the boiler, multiclone, and ESP within 60 days of issuance of this permit. The permittee shall have developed an O&M manual for the ESP according to manufacturer specifications and recommendations. This manual shall describe the methods and procedures that will be followed to assure the ESP is maintained in good working order and operated as efficiently as practical. The O&M manuals shall be updated as necessary and shall include, at a minimum, the most recent general descriptions of the equipment; the normal operating conditions and procedures for the boiler; startup, shutdown, and maintenance procedures; upset conditions guidelines; and corrective action procedures. The operating parameters of the ESP monitored during the performance testing, completed in accordance with Permit Condition 3.7, will be used to determine the minimum secondary power (voltage x current) to be applied to the ESP. The minimum power setting shall be specified in the O&M manual for the ESP.

The O&M manual requirements were modified (see the last sentence of the condition) to show the change from the "operating range" requirement to the "minimum power" requirement. This addition was a modification from what was requested in the application. It has been reworded as suggested by the Coeur d'Alene Regional Office with concurrence from Potlatch Corporation.

7. PUBLIC COMMENT

A public comment period on the proposed Tier II operating permit and application materials will be provided in accordance with IDAPA 58.01.01.209.01.c and 404.01.c.

8. RECOMMENDATION

Based on the review of the application materials, and all applicable state and federal regulations, staff recommends that DEQ provide proposed Tier II Operating Permit and Permit to Construct No. T2-040124 for public comment.

CZ/sd Permit No. P-040124

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APPENDIX A

CAM Technical Guidance Document, Electrostatic Precipitator for PM Control

APPENDIX B

AIRS Form

AIRS/AFS[a] FACILITY-WIDE CLASSIFICATION[b] DATA ENTRY FORM

Facility Name: Potlatch Corporation
Facility Location: Milltown Road, St. Maries
AIRS Number: 009-00030

AIR PROGRAM POLLUTANT	SIP	PSD	NSPS (Part 60)	NESHAP (Part 61)	MACT (Part 63)	SM80	TITLE V	AREA CLASSIFICATION A-Attainment U-Unclassified N- Nonattainment
SO_2	B							U
NO_x	B							U
CO	A						A	U
PM_{10}	SM							U
PT (Particulate)	SM							U
VOC	A						A	U
THAP (Total HAPs)	B							
			APPLICABLE SUBPART					

[a] Aerometric Information Retrieval System (AIRS) Facility Subsystem (AFS)

[b] AIRS/AFS Classification Codes:

A = Actual or potential emissions of a pollutant are above the applicable major source threshold. For HAPs only, class "A" is applied to each pollutant which is at or above the 10 T/yr threshold, **or** each pollutant that is below the 10 T/yr threshold, but contributes to a plant total in excess of 25 T/yr of all HAPs.

SM = Potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable regulations or limitations.

B = Actual and potential emissions below all applicable major source thresholds.

C = Class is unknown.

ND = Major source thresholds are not defined (e.g., radionuclides).